

UNIVERSITY OF CALIFORNIA  
COLLEGE OF AGRICULTURE  
BERKELEY, CALIFORNIA

AGRICULTURAL EXPERIMENT STATION  
E. J. WICKSON, DIRECTOR

CIRCULAR NO. 57

(SEPTEMBER, 1910)

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Announcement of Farmers' Short Courses

in

Animal Industry and Veterinary Science

at the

University Farm, Davis, California

October 17th—November 4th



DAIRY BARN.

## ANIMAL INDUSTRY AND VETERINARY SCIENCE.

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### INSTRUCTING STAFF.

E. W. MAJOR, B.Agr., Associate Professor of Animal Industry.  
C. M. HARING, D.V.M., Assistant Professor of Veterinary Science.  
HOWARD PHILLIPS, B.S.A., Instructor in Animal Industry.  
F. D. HAWK, B.S.A., Instructor in Animal Industry.  
J. I. THOMPSON, B.S.A., Instructor in Animal Industry.  
C. L. ROADHOUSE, D.V.M., Veterinary Expert for the San Francisco County Medical Milk Commission.



ENTRANCE TO FARM.

### SPECIAL LECTURERS.

W. B. HERMS, B.S., Assistant Professor of Entomology.  
C. B. LIPMAN, Ph.D., Assistant Professor of Soil Bacteriology.  
F. H. McNAIR, D.V.M., City Veterinarian of Berkeley, Calif.  
A. S. ALMEIDA, D.V.M., Dixon, Calif.

## ANIMAL INDUSTRY.

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In agricultural lines California's greatest need, at the present time, is more and better live stock. There is probably no other state that has the natural conditions that fit her to become a leader in this work to a greater degree than has California. Feed, climate, and markets all combine to make the business a profitable one, and yet in every branch of the industry we find a scarcity of animals. Pure bred cattle, particularly females, can hardly be purchased anywhere in the State. The same is true of sheep, swine and horses. Why this should be so is hard to understand, but that it is so needs no proof.

To the farmer no line offers more certain returns, nor more enjoyable work than does live stock. In order to succeed, however, one must be well posted on the various breeds and breed types, their adaptability to conditions that surround his farm, and their value on the market. The proper feeding, care, and handling must receive attention, because it is only by a thorough study of these subjects that economical production can be brought about, and a study of the principles of breeding that govern the mating of individuals will aid a man to so pair the individuals in his herd or flock that satisfactory results will follow.

The object of the Short Course, therefore, is to enable those students who can not devote sufficient time to take one of the longer courses to become familiar with the more important breeds and their types, and to become acquainted with the literature that deals with the subjects of breeding, feeding, and management. Lectures will be given covering these subjects so as to enable the students to secure in a condensed form the best practices along these lines.

### DAIRY CATTLE.

The great importance of the dairy industry in California, and its possibilities as a means of producing greater returns from the land, demands that considerable attention should be given to this subject. One of the more important factors in the profitable conduct of a dairy farm is that the cattle handled there should be of such a character as to insure high production. How many of our dairymen know what their cows are doing, or can tell which are the profitable ones and which are the boarders? A good deal of attention will, therefore, be given to the selection of dairy cattle and the judging of dairy breeds. There will be practice work twice a day along this line, and lectures

will be given each morning which will cover the subjects of feeding, breeding, and improvement of our dairy stock. In the evenings illustrated lectures will be given dealing with the history of the dairy breeds and breed types.

#### BEEF CATTLE.

Until within the past few years the raising of beef cattle has been confined largely to the big ranches. Conditions, however, are changing and California will, without question, soon be raising large numbers of beef cattle on smaller farms. The cutting up of the large ranges and the high price of beef are indications that this will surely come about. Attention will be given especially to that phase of the beef cattle industry. Two judging periods daily, and lectures will give the student a good opportunity for becoming well posted on beef type and familiar with some of the leading breeds; also with the best methods of handling them under California conditions.

#### SHEEP.

Greater profits usually come from increased production on the same area, consequently sheep-raising is attracting more and more attention every day from the smaller farmers. No class of live stock produces gains so economically as does sheep, when the kind of feed they consume is taken into consideration. The average ranch has an abundance of coarse feed, but this is generally wasted when no sheep are kept to consume it.

Wool has been selling at a price that has netted a considerable profit, and the scarcity of beef has kept and undoubtedly will keep the price of mutton sufficiently high to make sheep-raising a profitable line to follow. Fitting in as they do, where other live stock are kept, stockmen are beginning to see the necessity of studying the origin, history, and types of the various breeds of sheep in order that they may be better able to select the breed best suited to their fancy and conditions, or that they may more intelligently handle those already at hand.

The lectures and judging work in this course have been arranged with these facts in mind, and an effort will be made to give some time to the consideration of each breed.

#### SWINE.

A study of live stock statistics shows that California is very deficient in the number of hogs that are raised on the farms. Every year train loads of hogs are brought into the State from the Middle West, and there is no reason whatever why California farmers should not supply all or the greater part of these. The demand for pure bred stock is such that the few breeders in the State are unable to supply it

and breeders in other states are reaping the reward. Many of the newcomers to this State are men who come from sections where hog-raising is an important industry and they are good judges as well as good buyers. It is essential, therefore, that the young breeder should have a clear idea in mind of what constitutes breed type and also the best way to develop his young stock.

Practice periods in judging and lectures will be devoted to these subjects, and good opportunity given to students to become well posted on them.

#### HORSES.

A few years ago it was predicted that the street car would eliminate the horse from the cities. Then the automobile and gasoline engine promised to crowd him off the farm, but these predictions certainly went wide of the mark, for never before have horses brought more money under average conditions than they are bringing to-day. Buyers for the large firms in the cities have hunted the country over for the right kind and have not been able to find them. The prices of mules, too, have kept pace with that of horses, and the demand is still far ahead of the supply. Whether these prices will stay where they are can not be foretold with certainty, but the supply for the next five or six years is surely inadequate.

While all classes of horses are profitable now, the good ones pay the best, and breeders should always make an effort to keep posted on the types the market demands and the characteristics of the several breeds. Better methods of handling the stallions, mares and foals are being worked out and breeders will find this both interesting and profitable. These, and similar subjects, will be taken up and studied during the Short Course, and good specimens of the leading breeds will be available for class work.

#### VETERINARY SCIENCE.

The lectures and clinical work for this course have been arranged to meet a demand for instruction in this subject. The course is not intended to qualify men to practice veterinary medicine or surgery. The State law requires that professional veterinarians shall have completed a thorough three-year course of seven months each at a recognized veterinary college. This Short Course aims to give in the time available as much information as possible concerning animal diseases and farm surgery. A limited number of students will be privileged to perform such operations as castrating, spaying, dehorning, and caponizing. Prospective students who especially desire to obtain this privilege are advised to write to the Veterinary Science Division, College of Agriculture, Berkeley, previous to October 17th.

## SCHEDULE—ANIMAL INDUSTRY AND VETERINARY SCIENCE SHORT COURSE.

OCTOBER 17-22, INCLUSIVE.

8-9 a.m.	9-11 a.m.	11-12 a.m.	1-2 p.m.	Veterinary Science Lecture Room 2, Veterinary Building	Veterinary Clinic At the stable Treatment of bloat, impaction and other common troubles of cattle.	Demonstration Study of bacteria in cultures and under the microscope.	Illustrated Lecture by Prof. Lipman in Room 2, Veterinary Building	7:30 p.m.
Mon., Oct. 17.	Registration of Students.			Useful Facts Concerning the Anatomy and Physiology of Cattle.				
				Temperatures will be taken preparatory to the tuberculin test.				
Tues., Oct. 18.	Animal Industry Lecture Feeding Dairy Stock.	Judging Dairy Stock.	Veterinary Science Lecture Common Diseases of Cattle.		1-3 p.m. Lecture and Judging Dairy Stock.	3-5 p.m. Veterinary Clinic Treatment of milk fever, abortion and calf troubles.	Illustrated Lecture Jersey, Guernsey.	
Wed., Oct. 19.	Animal Industry Lecture Improving the Dairy Herd.	Judging Dairy Stock.	Veterinary Science Lecture Bovine Tuberculosis.		1-3 p.m. Lecture and Judging Dairy Stock.	3-5 p.m. Veterinary Clinic Treatment of milk fever, abortion and calf troubles.	Illustrated Lecture Holstein and Ayrshire.	
Thurs., Oct. 20.	Animal Industry Lecture Management of the Dairy Herd.	Judging Dairy Stock.	Veterinary Science Lecture Diseases of Cattle and Hogs of Im- portance in Meat Inspection.		1-3 p.m. Lecture and Judging Dairy Stock.	3-5 p.m. Veterinary Clinic Cattle Surgery.	Illustrated Lecture Beef Cattle.	
Fri., Oct. 21.	Animal Industry Lecture Dairy Barns and Sanitary Milk Pro- duction.	Judging Dairy Stock.	Veterinary Science Lecture Hygiene of Dairy Animals		1-3 p.m. Lecture and Judging Dairy Stock.	3-5 p.m. Veterinary Clinic Cattle Surgery.	Illustrated Lecture Beef Cattle.	
Sat., Oct. 22.	Tuberculin Test will be conducted at the Veterinary Stable throughout the day.							

OCTOBER 24-29, INCLUSIVE.

8-9 a.m.	9-11 a.m.	11-12 a.m.	1-3 p.m.	3-5 p.m.	7:30 p.m.
Monday, Oct. 24.	Animal Industry Lecture Feeding Beef Cattle.	Judging Beef Cattle.	Veterinary Science Lecture Simple Medicines Useful in the Treatment of Cattle.	Lecture and Judging Beef Cattle.	Veterinary Clinic Dehorning and other cattle surgery.
Tuesday, Oct. 25.	Animal Industry Lecture Feeding Sheep.	Judging Sheep.	Veterinary Science Lecture Useful Facts Con- cerning the Anat- omy and Physiology of Sheep.	Lecture and Judging Sheep.	Veterinary Clinic Illustrated Lecture Control of Infectious Diseases in Cattle.
Wednesday, Oct. 26.	Animal Industry Lecture Economical Method of Starting a Flock.	Judging Sheep.	Veterinary Science Lecture U. S. Sheep Inspector.—Diseases of Sheep.	Lecture and Judging Sheep.	Veterinary Clinic Dipping of Sheep and Hogs and demon- stration of Sheep Scab.—U. S. Sheep Inspector.
Thursday, Oct. 27.	Animal Industry Lecture Feeding and Manage- ment of the Flock.	Judging Swine.	Veterinary Science Lecture Diseases of Swine.	Lecture and Judging Swine.	Veterinary Clinic Castrating and spay- ing of Pigs.
Friday, Oct. 28.	Animal Industry Lecture Feeding the Breeding Herd.	Judging Swine.	Veterinary Science Lecture Anatomy and Physi- ology of Poultry.	Lecture and Judging Swine.	Veterinary Clinic Caponizing and other poultry surgery.
Saturday, Oct. 29.	Animal Industry Lecture Fattening for Market.			Judging Swine.	California's Greatest Need — More and Better Live Stock.

OCTOBER 31-NOVEMBER 4, INCLUSIVE.

8-9 a.m.	Animal Industry Lecture Barns and Houses.	Judging Swine.	Veterinary Science Useful Facts Concerning the Anatomy and Physiology of Horses.	Lecture and Judging Horses.	Veterinary Clinic Equine Surgery	Illustrated Lecture Light Horses.	7:30 p.m.
9-11 a.m.							3-5 p.m.
Monday, Oct. 31.							
Tuesday, Nov. 1.	Animal Industry Lecture Feeding Work Horses.	Judging Horses.	Veterinary Science Common Unsoundnesses of Horses.	Lecture and Judging Horses.	Veterinary Clinic Examination of the Horse for Soundness.	Illustrated Lecture Draft Horses.	
Wednesday, Nov. 2.	Animal Industry Lecture Care and Management of— (a) The Stallion. (b) The Mare and Foal.	Judging Horses.	Veterinary Science Simple Medicines in the Treatment of Horses.	Lecture and Judging Horses.	Instruction in telling the age of horses by the teeth.	Illustrated Lecture Control of Infectious Diseases of Animals.	
Thursday, Nov. 3.	Animal Industry Lecture How to Improve Our Horses.	Judging Horses.	Veterinary Obstetrics and Troubles.	Review.	Practice in the preparation of simple farm remedies.	The Marketing of Pure Bred Live Stock.	
Friday, Nov. 4.							Veterinary Science Lecture Common Errors in the Treatment of Domestic Animals.

UNIVERSITY OF CALIFORNIA—COLLEGE OF AGRICULTURE.

UNIVERSITY FARM, DAVIS, CALIFORNIA.

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SHORT COURSE

IN

ANIMAL INDUSTRIES AND VETERINARY SCIENCE.

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APPLICATION FORM.

I desire to attend the Short Course in Animal Industries and Veterinary Science. I am particularly interested in the following line

of work .....

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(Signed) .....

Home Address: .....

Date of Application: .....

It will be helpful to us to know approximately the expected attendance in the course before the time of beginning, and we thus ask all to fill out and mail the above application as soon as the decision to attend is reached. Address: Superintendent of University Farm Schools, Davis, California.



ANIMAL INDUSTRY  
LECTURES.

Mornings, 10-11 o'clock.

Mon., Oct. 17.

Tues., Oct. 18. Feeding Dairy Stock.

Wed., Oct. 19. Improving the Dairy Herd.

Thur., Oct. 20. Management of the Dairy Herd.

Fri., Oct. 21. Dairy Barns and Sanitary Milk Production.

Mon., Oct. 24. Feeding Beef Cattle.

Tues., Oct. 25. Feeding Steers.

Wed., Oct. 26. Economical Method of Starting a Flock.

Thur., Oct. 27. Feeding and Management of the Flock.

Fri., Oct. 28. Feeding the Breeding Herd.

Sat., Oct. 29. Fattening for Market.

Mon., Oct. 31. Barns and Houses.

Tues., Nov. 1. Feeding Work Horses.

Wed., Nov. 2. Care and Management of  
(a) The Stallion.  
(b) The Mare and Foal.

Thur., Nov. 3. How to Improve Our Horses.

Fri., Nov. 4.

VETERINARY SCIENCE  
LECTURES.

Afternoon, 1 o'clock.

Useful Facts Concerning the Anatomy and Physiology of Cattle.

Common Diseases of Cattle.  
Bovine Tuberculosis.

Diseases of Cattle and Hogs of Importance in Meat Inspection.

Hygiene of Dairy Animals.

Simple Medicines Useful in the Treatment of Cattle.

Useful Facts Concerning the Anatomy and Physiology of Sheep.

Diseases of Sheep.

Diseases of Swine.

Poultry Anatomy and Physiology.

Useful Facts Concerning the Anatomy and Physiology of Horses.

Common Unsoundnesses of Horses.

Simple Medicines Useful in the Treatment of Horses.

Veterinary Obstetrics and Breeding Troubles.

Common Errors in the Treatment of Domestic Animals.

## EVENING LECTURES.

Monday, Oct. 17. The Relation of Bacteria to Agriculture. (Illustrated.)  
By Professor Lipman.

Tuesday, Oct. 18. Jersey, Guernsey. (Illustrated.)

Wednesday, Oct. 19. Holstein, Ayrshire. (Illustrated.)

Thursday, Oct. 20. Beef Cattle. (Illustrated).

Monday, Oct. 24. Sheep. (Illustrated.)

Tuesday, Oct. 25. Control of Infectious Diseases in Cattle. (Illustrated.)

Wednesday, Oct. 26. Parasites of Sheep. (Illustrated.) By Professor Herms.

Thursday, Oct. 27. Swine. (Illustrated.)

Friday, Oct. 28. California's Greatest Need—More and Better Live Stock.

Monday, Oct. 31. Light Horses. (Illustrated.)

Tuesday, Nov. 1. Draft Horses. (Illustrated.)

Wednesday, Nov. 2. Infectious Diseases of Animals. (Illustrated.)

Thursday, Nov. 3. The Marketing of Pure Bred Live Stock.



AUTOPSY OF A TUBERCULOUS COW.

## OTHER SHORT COURSES IN 1910 AT UNIVERSITY FARM.

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**General Agriculture**, two weeks, September 26th-October 8th.

Irrigation, soils, fertilizers, cereals, green manure crops, forage crops, farm management.

**Dairy Manufactures**, eight weeks, October 3rd-November 22nd.

Butter and cheese making, milk, cream and butter testing, separators, and creamery machinery.

**Market Milk and Cream Supply**, October 17th-28th.

Milk and cream testing, separators, pasteurizers, bottling machines, care of milk and cream, breeding and judging dairy cattle.

**Poultry Husbandry.**

Incubation and Brooding, seven weeks, October 3rd-November 19th.

Lectures and Demonstrations, two weeks, October 17th-28th.

How to establish a poultry plant, breeds, breeding, judging, feeding, incubators and brooders.

**Horticulture and Viticulture**, two weeks, November 9th-23rd.

Nursery work, bench grafting, pruning, spraying, cultivation, irrigation, fertilization, fungous and other diseases, insects, methods of marketing.

**Farmers' Week**, October 10th-15th.

Lectures and demonstrations in all lines of agriculture. Live topics discussed by experienced men and women. Household economics and demonstrations in cooking. All for the farm and home.

For circular giving details of all courses at University Farm, address

LEROY ANDERSON,

SUPERINTENDENT UNIVERSITY FARM SCHOOLS,

BERKELEY, CALIFORNIA.





JUDGING LIVE STOCK.

